

What is claimed is:

1. A method for consistent error presentation within a system of one or more storage area networks including an intelligent multi-protocol switch (IMPS) combined with a storage and switch controller including at least one microprocessor and a disk array for storing meta-data related to the plurality of data storage volumes such that the one or more data storage networks are managed by the controller using the meta-data and by interacting with the IMPS wherein the method comprises the steps of:
  - in response to receiving an error from a data storage system in one of the storage area networks, the controller processing the error by selectively either masking the error from the host or presenting the error to the host as being from the controller rather than the data storage system.
2. The method of claim 1, wherein any error is presented using a delivery algorithm that allows a storage software application on the controller to mask errors from other higher storage software applications on the controller.
3. The method of claim 2, wherein the storage software application receiving an error is given an initial context of the I/O request along with the error allowing them to only incur additional overhead when exceptional conditions arise.

4. The method of claim 2, where the application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
5. The method of claim 3, where the application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
6. The method of claim 1, wherein at least one storage software application is given an initial context of the I/O request along with the error allowing them to only incur additional overhead when exceptional conditions arise.
7. The method of claim 6, where the storage application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
8. The method of claim 7, where the storage application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
9. A system for consistent error presentation within a one or more storage area networks, the system comprising an intelligent multi-protocol switch (IMPS) combined with a storage and switch controller including at least one microprocessor and a disk array for storing meta-data related to the plurality of data storage volumes such that the one or more data storage networks are managed by the controller using the meta-data and by interacting with the IMPS

wherein the system includes computer-executable logic for executing the steps

of:

in response to receiving an error from a data storage system in one of the storage area networks, the controller processing the error by selectively either masking the error from the host or presenting the error to the host as being from the controller rather than the data storage system.

10. The system of claim 9, wherein any error is presented using a delivery algorithm that allows a storage software application on the controller to mask errors from other higher storage software applications on the controller.
11. The system of claim 10, wherein the storage software application receiving an error is given an initial context of the I/O request along with the error allowing them to only incur additional overhead when exceptional conditions arise.
12. The system of claim 10, where the application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
13. The system of claim 11, where the application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
14. The system of claim 9, wherein at least one storage software application is given an initial context of the I/O request along with the error allowing them to only incur additional overhead when exceptional conditions arise.

15. The system of claim 14, where the storage application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
16. The system of claim 15, where the storage application presents errors to the host that make the volume affected with the error appear as a single logical device to the hosts that issued the I/O request.
17. A program product for consistent error presentation within a system of one or more storage area networks including an intelligent multi-protocol switch (IMPS) combined with a storage and switch controller including at least one microprocessor and a disk array for storing meta-data related to the plurality of data storage volumes such that the one or more data storage networks are managed by the controller using the meta-data and by interacting with the IMPS wherein the program product including computer-executable logic encoded on a computer readable medium for executing the steps of:
  - in response to receiving an error from a data storage system in one of the storage area networks, the controller processing the error by selectively either masking the error from the host or presenting the error to the host as being from the controller rather than the data storage system.